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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,094	04/09/2001	Holger Eggers	MO-6283/WW-5	2976

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EXAMINER

RIBAR, TRAVIS B

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 06/06/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/807,094

Applicant(s)

EGGERS ET AL.

Examiner

Travis B Ribar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 2-6, 8, and 10 are provisionally rejected under the judicially created doctrine of double patenting over claim 2-6, 8, and 15 of copending Application No. 09/807294. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows:

Claim 5 in copending application no. 09/807294 meets the elements of claims 1 and 2 of the current application with the exception of stating the thickness of the additional polyamide layers. However, it would have been obvious to make the additional polyamide layers in the film claimed in claim 5 of copending application no.

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09/807294 thick enough to meet the thickness requirement of claim 1 of the current application in order to create a film with increased mechanical and barrier properties. Further, it would have been obvious from claims 1 and 2 of the current application to produce a single layer film consisting of the nanoscale-particle-filled polyamide suitable for use in numerous applications, including foodstuffs, and therefore meet the scope of claim 5 in copending application no. 09/807294.

Claim 2 in copending application no. 09/807294 meets the elements of claim 3 of the current application with the exception discussed above.

Claim 3 in copending application no. 09/807294 meets the elements of claim 4 of the current application with the exception discussed above.

Claim 4 in copending application no. 09/807294 meets the elements of claim 5 of the current application with the exception discussed above. Here it is noted that layered silicates are layers of sheet silicates.

Claim 6 in copending application no. 09/807294 meets the elements of claim 6 of the current application with the exception discussed above.

Claim 8 in copending application no. 09/807294 meets the elements of claim 8 of the current application with the exception discussed above. Here it is noted that a coupling layer is an adhesion-promoting layer.

Claim 15 in copending application no. 09/807294 meets the elements of claim 10 of the current application with the exception discussed above.

Consequently, claims 2-6, 8, and 10 are directed to an invention not patentably distinct from claims 2-6, 8, and 15 of commonly assigned application no. 09/807294.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned application no. 09/807294, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 37 CFR 1.78(c) and 35 U.S.C. 132 to either show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 3 includes a Markush group, but is not written in proper Markush language. Proper language is closed and would be, for example, "...selected from the group consisting of A, B, C, and D."

6. Regarding claim 4, it is unclear from the language of the claim what exactly is being claimed. For the purposes of this examination, this claim will be presumed to mean that the aspect ratio of the particles is at most 10.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramesh in view of the combined teachings of Khanna et al. and Mizutani et al.

Ramesh discloses a multilayer film structure useful for the packaging of foodstuffs (column 19, lines 22-31, meeting claim 12) that includes multiple layers of polyamide and ethylene-vinyl alcohol (column 2, lines 38-53). In the multilayer film, the outer layer is polyamide (column 3, lines 23-25 and column 15, line 47) and there may be a tie layer between the layers in order to improve adhesion between them (column 3,

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lines 33-38). In this respect, Ramesh meets these parts of claims 1, 6, and 8. The second polyamide layer in Ramesh does not include nano-scale nucleating agents (meeting this part of claim 1) and the film may include a heat-sealing layer on one outer surface of the film (column 19, line 3 and column 14, lines 54-55), meeting claim 7.

In embodiments where the multilayer film includes a tie layer and other polymer layers (such as example 3 in the reference, for example), it meets the restrictions put forth in claim 9.

Ramesh also teaches in example 3 the stretching characteristics (column 21, line 57 to column 22, line 1) and production process that the applicant claims in claims 10 and 11, respectively.

Ramesh does not, however, teach the inclusion of nucleating agents in the polyamide layer or the cooling rate that the applicant claims. Nor does it teach that the outer layer should be less than 50% of the total thickness of all of the polyamide layers in the multilayer film.

Khanna et al. discloses a polyamide polymer (column 7, lines 14-33) that is used as a single or multi-layer film (column 11, lines 42-59). The polyamide polymer can be pure polyamide 6 (meeting that part of claim 1) and includes a small amount (column 9, lines 9-16) of silica nucleating agent (column 8, line 67). The presence of nucleating agent and, therefore, a crystalline structure, in the polymer leads to a polymeric article with improved mechanical properties.

The amount of nucleating agent present in the film falls in the range specified by the applicant in claim 2 because silica particles have diameters less than 100 nm, they

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fulfill that aspect of claim 1 as well. Regarding the part of claim 1 reflecting where the crystals are formed in the polymer, it is well known that a nucleating agent is used so that polymer crystals form from the surface of the nucleating agent upon cooling of the polymer.

Khanna et al. also envisions the use of other polymers besides polyamide 6 in the polymer film (column 7, lines 14-33) in the form of copolymers or blends. The presence of less than 10% by weight of a second polyamide in the film (in addition to the polyamide 6 that is present) is therefore also envisioned in the reference, meeting this aspect of claim 3.

Khanna et al. does not, however, disclose the cooling rate that the applicant specifies in claim 1 or that the nucleating agents have high aspect ratios or are layered silicates (claims 4 and 5). These aspects of the invention are found in Mizutani et al.

Mizutani et al. discloses that layered silica, montmorillonite, which has the aspect ratio that the applicant claims in claim 4, is a suitable nucleating agent for creating crystals in polymers (column 12, line 45). It is well known in the art that in order to nucleate a polymer one must cool it from above its melting temperature to below its glass transition temperature. Mizutani et al. discloses that the cooling rate that the applicant cites in claim 1 is known in the art to form crystals in a polymer (column 17, lines 22-23).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the polyamide film taught by the combination of Khanna et al. and Mizutani et al. as the outer layer in the multilayer film shown in Ramesh in a thickness of



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less than 50% of the total thickness of the polyamide layers in the multilayer film. The motivation for doing so would be to provide a multilayer film with improved mechanical properties. These improved mechanical properties would also allow the thickness of the outer film in the multilayer film in Ramesh to be thinner and still give the same mechanical properties as an uncrystallized film. The advantage to a tape with that structure is that less polyamide raw material is used in the production of the tape, leading to savings in raw materials cost. Therefore it would have been obvious to combine Khanna et al. and Mizutani et al. with Ramesh to obtain the invention as specified in claims 1-9 and 11-16.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Friske, cited by the applicant, shows a laminate structure similar to that claimed in the current invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis B Ribar whose telephone number is (703) 305-3140. The examiner can normally be reached on 8:30-5:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Travis B Ribar  
Examiner  
Art Unit 1711

TBR  
June 3, 2002



James J. Seidleck  
Supervisory Patent Examiner  
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